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TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number	10/537,052 (Conf. #8397)
Filing Date	2 June 2005
First Named Inventor	Allan SHEPARD et al.
Art Unit	1614
Examiner Name	
Attorney Docket Number	2335 US F

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☒ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
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- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) (please Identify below):

corresponding PCT/US03/040511 Search Report [2 pp] and Return Card.

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Alcon Research, Ltd.		
Signature	Teresa J Schultz		
Printed name	Teresa J. Schultz		
Date	11 October 2005	Reg. No.	40,526

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Signature	Barbara McKenzie		
Typed or printed name	Barbara McKenzie	Date	11 October 2005

First Class Mail

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Allan SHEPARD et al.
Serial No: 10/537,052 (Conf. #8397)
Filed: 2 June 2005
Examiner:
Group Art Unit: 1614
FOR: USE OF CATHEPSIN K INHIBITORS FOR THE TREATMENT OF GLAUCOMA

INFORMATION DISCLOSURE STATEMENT PURSUANT TO 37 C.F.R. 1.56, 1.97, AND 1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. 1.56, 1.97, and 1.98, Applicants submit the patents, articles, and other information referenced in the specification as filed. The references are listed on the attached PTO Form 1449. Applicants are submitting copies of the foreign patents and non-patent literature in accordance with 37 CFR 1.98(a)(2), copies of the U.S. patents are not enclosed.

A copy of the International Search Report issued in the PCT application, of which the present application is a 35 U.S.C. §371 application, is also included for the Examiner's convenience.

Applicants request that the listed patents, articles, and other information be considered during prosecution of this application and that they appear among the "References Cited" on any patent issuing herefrom.

Respectfully submitted,

11 October 2005
Date

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Attorney Docket No.: 2335 US F

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 6

Complete if Known	
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U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US- 5,830,850	11/03/1998	Gelb et al.	
	A2	US- 5,998,470	12/07/1999	Halbert et al.	
	A3	US- 6,034,077	03/07/2000	Singh et al.	
	A4	US- 6,057,362	05/02/2000	Yamashita	
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FOREIGN PATENT DOCUMENTS

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Examiner Signature		Date Considered	

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	B1	ALTMANN et al., "Arylaminoethyl amides as novel non-covalent cathepsin K inhibitors," J. MED. CHEM. 45:2352-2354 (2002)	
	B2	BILLINGTON et al., "The slow-binding inhibition of cathepsin K by its propeptide," BIOCHEM. BIOPHYS. RES. COMMUN. 276:924-929 (2000)	
	B3	BOSSARD et al., "Mechanism of inhibition of cathepsin K by potent, selective 1,5-diacylcarbohydrazides: a new class of mechanism-based inhibitors of thiol proteases," BIOCHEMISTRY 38:15893-15902 (1999)	
	B4	BRÖMME et al., "Peptidyl vinyl sulphones: a new class of potent and selective cysteine protease inhibitors: S2P2 specificity of human cathepsin O2 in comparison with cathepsins S and L," BIOCHEM. J. 315:85-89 (1996)	
	B5	CLARK et al., "Glucocorticoid-induced formation of cross-linked actin networks in cultured human trabecular meshwork cells," IOVS 35:281-294 (1994)	
	B6	CLAVEAU et al., Biochemical and Biophysical Research Communications 281:551-557 (2001)	
	B7	DICKERSON et al., "The effect of dexamethasone on integrin and laminin expression in cultured human trabecular meshwork cells," EXP EYE RES 66:731-738 (1998)	
	B8	FALGUEYRET et al., "Novel, nonpeptidic cyanamides as potent and reversible inhibitors of human cathepsins K and L," J. MED. CHEM. 44:94-104 (2001)	
	B9	FENWICK et al., "Solid-phase synthesis of cyclic alkoxyketones; inhibitors of the cysteine protease cathepsin K," BIOORG. MED. CHEM. LETT. 11:195-198 (2001a)	
	B10	FENWICK et al., "Diastereoselective synthesis, activity and chiral stability of cyclic alkoxyketone inhibitors of cathepsin K," BIOORG. MED. CHEM. LETT. 11:199-202 (2001b)	

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	C1	HAECKEL, et al., Developmental Dynamics 216:89-95 (1999)	
	C2	KAMOLMATYAKUL, S., Chen, W., Li, Y.P., "Interferon-• down-regulates gene expression of cathepsin K in osteoclasts and inhibits osteoclast formation," J. DENT. RES. 80:351-355 (2001)	
	C3	KATUNUMA et al., "Study of the functional share of lysosomal cathepsins by the development of specific inhibitors," ADV. ENZYME REGUL. 39:247-260 (1999)	
	C4	KATUNUMA et al., "Structure-based development of pyridoxal propionate derivatives as specific inhibitors of cathepsin K in vitro and in vivo," BIOCHEM. BIOPHYS. RES. COMMUN. 267:850-854 (2000)	
	C5	KIVIRANTA et al., Journal of Bone And Mineral Research 16:1444-1452 (2001)	
	C6	LALONDE et al., "Use of papain as a model for the structure-based design of cathepsin K inhibitors: crystal structures of two papain-inhibitor complexes demonstrate binding to S'-subsites," J. MED. CHEM. 41:4567-4576 (1998)	
	C7	LARK et al., "A potent small molecule, nonpeptide inhibitor of Cathepsin K (SB 331750) prevents bone matrix resorption in the ovariectomized rat," BONE 30(5):746-753 (2002)	
	C8	LEUNG-TOUNG et al., "Thiol-dependent enzymes and their inhibitors: a review", CURR MED CHEM 9:979-1002 (2002)	
	C9	MARQUIS et al., "Potent dipeptidylketone inhibitors of the cysteine protease cathepsin K," BIOORG. MED. CHEM. 7:581-588 (1999)	
	C10	MARQUIS et al., "Azepanone-based inhibitors of human and rat cathepsin K," J. MED. CHEM. 44:1380-1395 (2001a)	

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	D1	MARQUIS et al., "Conformationally constrained 1,3-diamino ketones: a series of potent inhibitors of the cysteine protease cathepsin K," J. MED. CHEM. 41:3563-3567 (1998)	
	D2	MARQUIS et al., "Cyclic ketone inhibitors of the cysteine protease cathepsin K," J. MED. CHEM. 44:725-736 (2001b)	
	D3	MATSUMOTO et al., "Structural basis of inhibition of cysteine proteases by E-64 and its derivatives," BIOPOLYMERS 51:99-107 (1999)	
	D4	MCGRATH, M.E., Klaus, J.L., Barnes, M.G., Bromme, D., "Crystal structure of human cathepsin K complexed with a potent inhibitor," NAT. STRUCT. BIOL. 4:105-109 (1997)	
	D5	MOTYCKOVA et al., PNAS 98:5798-5803 (2001)	
	D6	ORTEGO et al., "Gene expression of proteases and protease inhibitors in the human ciliary epithelium and ODM-2 cells," EXP. EYE RES. 65:289-299 (1997)	
	D7	PATIL et al., "A new dimeric dihydrochalcone and a new prenylated flavone from the bud covers of Artocarpus altilis: potent inhibitors of cathepsin K", J NAT PROD 65:624-627 (2002a)	
	D8	PATIL et al., "Haploscleridamine, a novel tryptamine-derived alkaloid from a sponge of the order haplosclerida: an inhibitor of cathepsin K", J NAT PROD 65:628-629 (2002b)	
	D9	PERCIVAL et al., "Inhibition of cathepsin K by nitric oxide donors: evidence for the formation of mixed disulfides and a sulfenic acid," BIOCHEMISTRY 38:13574-13583 (1999)	
	D10	SAFTIG, et al., Proc. Natl. Acad. Sci. 95:13453-13458 (1998)	

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	E1	SCHICK et al., "Cross-Class Inhibition of the Cysteine Proteinases Cathepsins K, L, and S by the Serpin Squamous Cell Carcinoma Antigen 1: A Kinetic Analysis", BIOCHEMISTRY 37:5258-5266 (1998)	
	E2	SHEPARD et al., "Delayed Secondary Glucocorticoid Responsiveness of MYOC in Human Trabecular Meshwork Cells", IOVS 42:3173-3181 (2001)	
	E3	SMITH et al., "Discovery and parallel synthesis of a new class of cathepsin K inhibitors", BIOORG MED CHEM LETT 11:2951-2954 (2001)	
	E4	STEELY et al., "The effects of dexamethasone on fibronectin expression in cultured human trabecular meshwork cells," IOVS 33:2242-2250 (1992)	
	E5	STROUP et al., "Potent and selective inhibition of human cathepsin K leads to inhibition of bone resorption in vivo in a nonhuman primate", J BONE MINER RES 16(10):1739-1746 (2001)	
	E6	THOMPSON et al., "Design of potent and selective human cathepsin K inhibitors that span the active site," PROC. NATL. ACAD. SCI. U.S.A. 94:14249-14254 (1997)	
	E7	THOMPSON et al., "Structure-based design of cathepsin K inhibitors containing a benzyloxy-substituted benzoyl peptidomimetic," J. MED. CHEM. 41:3923-3927 (1998)	
	E8	THOMPSON et al., "Structure-based design of non-peptide, carbohydrazide-based cathepsin K inhibitors," BIOORG. MED. CHEM. 7:599-605 (1999)	
	E9	TURK, B., Turk, V., Turk, D., "Structural and functional aspects of papain-like cysteine proteinases and their protein inhibitors," BIOL. BHEM. 378:141-150 (1997)	
	E10	VOTTA et al., "Peptide aldehyde inhibitors of cathepsin K inhibit bone resorption both in vitro and in vivo," J. BONE MINER. RES. 12:1396-1406 (1997)	

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	F1	WANG et al., "Optimal procedure for extracting RNA from human ocular tissues and expression profiling of the congenital glaucoma gene FOXC1 using quantitative RT-PCR," MOL VIS 7:89-94 (2001)	
	F2	WILSON et al., "Dexamethasone induced ultrastructural changes in cultured human trabecular meshwork cells," CURR EYE RES 12:783 (1993)	
	F3	YAMASHITA et al., "Solid-phase synthesis of a combinatorial array of 1,3-bis(acylamino)-2-butanones, inhibitors of the cysteine proteases cathepsins K and L," J. COMB. CHEM. 1:207-215 (1999)	
	F4	YAMASHITA and DODDS, "Cathepsin K and the design of inhibitors of cathepsin K," CURR. PHARM. DES. 6:1-24 (2000)	
	F5	ZHAO, B., Janson, C.A., Amegadzie, B.Y., D'Alessio, K., Griffin, C., Hanning, C.R., Jones, C., Kurdyla, J., McQueney, M., Qiu, X., "Crystal structure of human osteoclast cathepsin K complex with E-64," NAT. STRUCT. BIOL. 4:109-111 (1997)	
	F6	International Search Report of a related PCT Application No. PCT/US2003/040511, mailed June 2, 2004	

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